National Institute of Environmental Health Sciences

Leishmaniasis and climate change-Case study: Argentina

Author(s): Salomón OD, Quintana MG, Mastrángelo AV, Fernández MS
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Abstract:

Vector-borne diseases closely associated with the environment, such as leishmaniases, have been a usual argument about the deleterious impact of climate change on public health. From the biological point of view interaction of different variables has different and even conflicting effects on the survival of vectors and the probability transmission of pathogens. The results on ecoepidemiology of leishmaniasis in Argentina related to climate variables at different scales of space and time are presented. These studies showed that the changes in transmission due to change or increase in frequency and intensity of climatic instability were expressed through changes in the probability of vector-human reservoir effective contacts. These changes of contact in turn are modulated by both direct effects on the biology and ecology of the organisms involved, as by perceptions and changes in the behavior of the human communities at risk. Therefore, from the perspective of public health and state policy, and taking into account the current nonlinear increased velocity of climate change, we concluded that discussing the uncertainties of large-scale models will have lower impact than to develop-validate mitigation strategies to be operative at local level, and compatibles with sustainable development, conservation biodiversity, and respect for cultural diversity.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes, Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Central/South America

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Fly-borne Disease

Fly-borne Disease: Leishmaniasis

Model/Methodology:

type of model used or methodology development is a focus of resource

Methodology

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified